

## The Claims

What is claimed is:

5           1. A stable oil for incorporation in a food,  
nutritional, pharmaceutical or cosmetic product, and  
containing one or more long-chain polyunsaturated fatty  
acids obtainable from a biomass, in the form of  
10 triacylglycerols serving both as transfer medium for  
the long-chain polyunsaturated fatty acids from the  
biomass and as carrier for the long-chain  
polyunsaturated fatty acids in the food, nutritional,  
pharmaceutical or cosmetic product and into which the  
15 long-chain polyunsaturated fatty acids are incorporated  
such that at least 60% by weight of the long-chain  
polyunsaturated fatty acids present in the biomass are  
present in the oil but that less than 10% of phosphorus  
that is present in the biomass is present in the oil,  
20 so that the oil does not require purification prior to  
use.

2. The stable oil according to Claim 1, in which  
the long-chain polyunsaturated fatty acid is  
arachidonic acid, dihomogammalinolenic acid,  
25 eicosapentaenoic acid or docosahexaenoic acid.

3. The stable oil according to Claim 2, in which  
the long-chain polyunsaturated fatty acid is  
arachidonic acid.  
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4. The stable oil according to Claim 2, in which  
the long-chain polyunsaturated fatty acid is  
docosahexaenoic acid.

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the carrier oil is high oleic acid sunflower oil  
(HOSFO), sunflower oil (SFO), soya bean oil, palm olein  
or a medium-chain triacylglycerol (MCT, containing

essentially triacylglycerols of saturated C<sub>8</sub>-C<sub>10</sub> fatty acids).

6. The stable oil according to Claim 1, wherein  
5 the stable oil contains no more than 10% by weight of LC-PUFAs.

7. A process for preparing a stable oil for  
incorporation into a composition of a food,  
10 nutritional, pharmaceutical or cosmetic product, which  
comprises bringing a carrier oil into contact with a  
biomass obtained from the culture of a microorganism  
containing one or more long-chain polyunsaturated fatty  
acids, so as to transfer the long-chain polyunsaturated  
15 fatty acid(s) in the form of triacylglycerols to the  
carrier and form a biomass residue, separating the oil  
containing the fatty acid(s) from the biomass residue,  
and then deodorizing the separated oil to obtain the  
stable oil without purification.

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8. The process according to Claim 7, which  
further comprises grinding the biomass prior to contact  
with the carrier oil to reduce particle size in order  
to break cell walls of the microorganisms and to  
25 thereby increase contact surface area between the  
carrier oil and the biomass.

9. The process according to Claim 7, which  
further comprises contacting the biomass under high  
30 pressure with the carrier oil, and separating the oil  
containing the long-chain polyunsaturated fatty acid  
from the biomass residue by pressing and filtration.

10. The process according to Claim 7, which  
35 further comprises grinding the biomass in the presence  
of the carrier oil under gentle conditions, at a  
moderate temperature, and under an inert atmosphere.

11. The process according to Claim 7, which is carried out under a nitrogen atmosphere and in the presence of one or more tocopherols in an amount sufficient to protect the LC-PUFAs from oxidative  
5 degradation.

12. The process according to Claim 7, wherein the deodorizing is achieved by molecular distillation or steam distillation, optionally assisted by vacuum.  
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13. The process according to Claim 7, which further comprises a final filtration of the stable oil to remove fine biomass particles.

14. The stable oil obtained by the process of Claim 7.  
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15. A product containing a stable oil according to Claim 14, wherein the stable oil contains no more  
20 than 10% by weight of LC-PUFAs.

16. The product of Claim 15 wherein the product is an infant foodstuff, a nutritional composition, a cosmetic composition in dry or emulsion form, or a  
25 foodstuff.

17. A product containing a stable oil according to Claim 1, wherein the stable oil contains no more than 10% by weight of LC-PUFAs.  
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18. The product of Claim 17 wherein the product is an infant foodstuff, a nutritional composition, a cosmetic composition in dry or emulsion form, or a  
35 foodstuff.

19. An animal feed containing the biomass residue obtained by the process according to Claim 7.